



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/647,809

08/25/2003

Ernesto Hernandez

0376FV.44316

2362

7590 06/18/2007
Constance Gall Rhebergen
Bracewell & Patterson, L.L.P.
P.O. Box 61389
Houston, TX 77208-1389

EXAMINER

LAO, MARIALOUISA

ART UNIT

PAPER NUMBER

1621

MAIL DATE

DELIVERY MODE

06/18/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/647,809	Applicant(s) HERNANDEZ, ERNESTO	
	Examiner M. Louisa Lao	Art Unit 1621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 April 2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) 19-30 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>12/15/03, 1/6/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Group I (claims 1-18) in the reply filed on 4/16/07 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an *election without traverse* (MPEP § 818.03(a)).

2. Claims 19-30 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made *without traverse* in the reply filed on 4/16/07.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Art Unit: 1621

6. **Claims 1-18 are rejected** under 35 U.S.C. 103(a) as being unpatentable over Hernandez et al. (US6448423, US'423 *in IDS*) in view of Van Dalen et al. (EP0361622, EP'622 *in IDS*) and Anghelescu et al. (US4981620, US'620 *in IDS*).

Applicant Claims

7. The instant claims are drawn to a method of physical refining of triglyceride oil, which contains no more than 0.05% free fatty acids by weight, comprising a series of heating and cooling steps, which includes, *inter alia*, (a) mixing said oil with an agglomerating agent for 15-30 minutes and at a range of 60-100°C to form an oil mixture, (b) cooling the oil mixture to a temperature range of 0-35°C, (c) removing at least a portion of the contaminants from the oil mixture, (d) heating the oil mixture to at least liquefy a majority of the oil mixture, (e) chilling the oil mixture, (f) warming the oil mixture, (g) cooling the oil mixture for 5-10 hours to a range of 0-10°C forming contaminants, which are in the form of crystallized matter, (h) adding a filter aid to the oil mixture and (i) filtering the crystallized matter from the oil mixture.

***Determination of the Scope and Content of the Prior Art
(MPEP §2141.01)***

8. US'423 teaches the removal of free fatty acid from glyceride oils with an agglomerating agent. The agglomerating agent, preferably a soluble silicate solution, causes the contaminants to form a discrete phase that is separated from the liquid oil phase through filtration. In column 2 lines 49-67, US'423 teaches that the temperature of contact between the oil and agglomerating agent is preferably maintained above 66°C. In column 3, lines 1-11, US'423 teaches that a filter aid, which include diatomaceous earth and Fuller's earth, is used to facilitate the physical separation of the contaminants from the oil.

Ascertainment of the Difference

***Between Scope of the Prior Art and the Claims
(MPEP §2141.012)***

9. The instant claims and the cited prior art references are drawn to the process of physical refining of (tri)glyceride oils. US'423 does not explicitly teach or exemplify the series of temperature gradients to achieve the removal of the contaminants from the glyceride oils. However, US'620 and EP'622 are relied to show that at the time of the invention, the application of a series of temperature gradients aided by the use of filter agents for the subsequent removal of contaminants was already shown to work. In column 7 lines 7-69 bridging to column 8 lines 1-39, US'620 teaches that heating of an oil/clay mixture at 100°C for 20 minutes and cooling to 10°C for one hour results to the removal of contaminants with the subsequent stable clarity. The clarity was dependent on the parameters of heating/cooling time and temperatures selected. Akin to the exemplifications stated in US'620, EP'622, likewise exemplifies, on page 7 Example II the heat/cool technique with a filtering aid and the subsequent removal of contaminants, thereto, relative to the quality of filtering aid used.

***Finding of Prima Facie Obviousness Rational and Motivation
(MPEP §2142-2143)***

10. At the time of the invention, one of ordinary skill in the art looking to improve on the method of physical refining of US'423, would have found it *prima facie* obvious to start with the teachings of the cited prior art references, US'620 and EP'622 and couple said teachings with the temperature gradients therewith, to make applicants' process using their methodology, reaction specifics and parameters, thereto. The combination of the teachings of the cited prior art suggests that specific features of their invention may be combined with other features in accordance with the invention, and alternatively embodiments will be recognized by those skilled in the art and

Art Unit: 1621

are intended to be included within the scope of the claims. Therefore, it would have been obvious to modify the combined cited prior art processes, such as by employing the temperature step gradients, since these are within the purview of artisan through routine experimentation, to develop an optimum physical refining technique for the removal of contaminants, including, *inter alia*, free fatty acids from (tri)glyceride oils with a reasonable expectation of success.

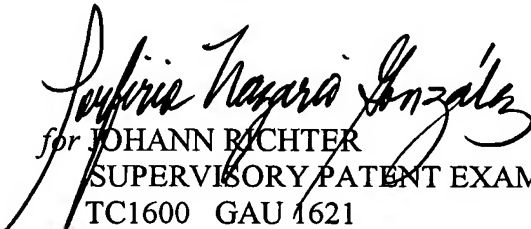
11. The recitation of alternate temperature ranges are optimization steps that are within the normal undertaking of one of ordinary skill in the art at the time of the invention and would not require any inordinate degree of experimentation.

12. Optimizing such processes is *prima facie* obvious because an ordinary artisan would be motivated to use known processes from the art to make the process more efficient or explore economical advantages over the other. Merely modifying the process conditions is not a patentable modification absent a showing of criticality. In re Aller, 220 F.2d 454, 105 U.S.P.Q. 233 (C.C.P.A. 1955).

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. Louisa Lao whose telephone number is 571-272-9930. The examiner can normally be reached on Mondays to Fridays from 8:30am to 5:00pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann Richter, can be reached on 571-272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ml 05312007
MLouisa Lao
Examiner
Art Unit 1621


for JOHANN RICHTER
SUPERVISORY PATENT EXAMINER
TC1600 GAU 1621